

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

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In the matter of the investigation, on the)	
Commission's own motion, into the electric)	
supply reliability plans of Michigan's)	Case No. U-18197
electric utilities for the years 2017 through 2021.)	
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At the July 31, 2017 meeting of the Michigan Public Service Commission in Lansing,
Michigan.

PRESENT: Hon. Sally A. Talberg, Chairman
Hon. Norman J. Saari, Commissioner
Hon. Rachael A. Eubanks, Commissioner

ORDER SUMMARIZING INVESTIGATION AND PARTIALLY CLOSING DOCKET

Beginning in 1998, the Commission commenced annual investigations into the adequacy and reliability of the electric generation capacity for meeting customer requirements in the Consumers Energy Company (Consumers), DTE Electric Company (DTE Electric), and Indiana Michigan Power Company (I&M) service territories. In subsequent years, the Commission expanded the scope of the investigations to include, among other things, the availability of transmission capability, the effects of the companies' retail open access programs, affiliate dealings, the Customer Choice and Electricity Reliability Act, MCL 460.10 *et seq.*, expected changes in the wholesale market for electricity in the Midwest, and the interconnection of merchant generating

plants. In Case No. U-14087, the Commission expanded its investigation to include all Michigan-regulated electric utilities, including member-regulated cooperatives.¹

In the December 19, 2013 order in Case No. U-17523, the Commission found that it should expand these investigations to a three-year planning horizon due to the expected retirement of older generating units in the state associated with implementation of new air quality requirements. In the December 4, 2014 order in Case No. U-17751, the Commission again extended the horizon to the five-year period of 2015-2019 in light of information garnered from the Case No. U-17523 investigation that foreshadowed the possibility of capacity shortfalls in Michigan as early as 2016. *See*, July 22, 2016 order in Case No. U-17992, p. 2, n. 2.

As in past years, the Commission opened this docket on January 12, 2017, to obtain from electric utilities regulated by the Commission, alternative electric suppliers, utility affiliates, and certain power supply cooperatives and associations, a self-assessment of their ability to meet their customers' expected electric requirements and associated planning reserves during the five-year period of 2017 through 2021. The Commission also invited other interested persons to file comments on the issues presented by this investigation.

In the January 12, 2017 order, the Commission directed that each assessment should include the load serving entity's (LSE) expected peak demand and the resources available and committed to meet peak demand, including applicable regional transmission organization (RTO) requirements such as expected reserves by applying the Midcontinent Independent System Operator, Inc.'s

¹ The Commission identifies these electric utilities as Consumers, DTE Electric, I&M, Alpena Power Company, Upper Peninsula Power Company, Wisconsin Electric Power Company, Wisconsin Public Service Corporation, Northern States Power Company, d/b/a Xcel Energy, Upper Michigan Energy Resources Corporation, and the following electric cooperatives: Alger-Delta Co-operative Electric Association, Cherryland Electric Cooperative, Cloverland Electric Co-operative, Great Lakes Energy Cooperative, Midwest Energy Cooperative, The Ontonagon County Rural Electrification Association, Presque Isle Electric & Gas Co-op, Thumb Electric Cooperative of Michigan, and HomeWorks Tri-County Electric Cooperative.

(MISO's) 2017/2018 planning year reserve for each of the five years; and that each assessment should justify the expected reserve margin in light of the LSE's circumstances, including the reliability characteristics of its resource base and the characteristics and diversities of the customer load. The Commission asked that each assessment distinguish between in-state and out-of-state resources, and identify applicable capacity import limits.

The Commission directed that each assessment provide details for each year regarding the actual deliverability of generation output and purchased power under peak operating conditions, and transmission capabilities and constraints, or other factors such as pricing, affecting deliverability and reliance on resources located in other RTOs or other local resource zones (LRZ or Zone) within an RTO. The Commission further requested that, given that MISO would be collecting and analyzing similar information from LSEs in its footprint during 2017 through the OMS-MISO² Resource Adequacy Survey (OMS-MISO RAS) and given that discrepancies may arise between MISO's results and what is reported to the Commission, regulated electric utilities share their OMS-MISO RAS submittals, including the balance sheet produced by MISO that summarizes each LSE's submittal.

Self-assessments were received from MidAmerican Energy Company, Direct Energy Business, LLC, Direct Energy Services, LLC, Ontonagon County Rural Electrification Association, Thumb Electric Cooperative, Northern States Power Company–Wisconsin, DTE Electric, Wolverine Power Supply Cooperative, Inc., I&M, FirstEnergy Solutions Corp., Consumers, Wisconsin Electric Power Company (WEPCo), Upper Peninsula Power Company, Upper Michigan Energy Resources Corporation, Constellation NewEnergy, Inc., Alger-Delta Cooperative Electric Association, CMS ERM Michigan LLC, UP Power Marketing, the Michigan

² Organization of MISO States – Midcontinent Independent System Operator, Inc.

Municipal Electric Association, WPPI Energy, Calpine Energy Solutions, LLC, Just Energy Solutions, Inc., and Eligo Energy MI, LLC.

All of the submitted reports and comments were reviewed by the Commission Staff (Staff). The Commission appreciates the efforts the Staff undertook to attempt to verify and reconcile information. It should be stressed that these annual resource investigations have not been conducted as contested cases under Chapter 4 of the Administrative Procedures Act of 1969, MCL 24.271 *et seq.*, or the Commission's Rules of Practice and Procedure, R 792.10401 *et seq.* So, the Commission and its Staff are not constrained by an evidentiary record in this endeavor, and the associated findings are not the result of a contested case hearing in which testimony and other information were subject to cross examination and admitted into the record as evidence. Therefore, statements by the LSEs regarding their forecasts and capacity plans are not necessarily supported with documentation that would allow the Staff or the Commission to verify the statements made in the filings. The Commission appreciates the cooperation of the utilities and other companies and organizations that participated in this annual investigation.³

Staff Comments

On June 27, 2017, the Staff filed comments and observations on the capacity outlook (Staff report). The Staff indicates that it relied on the self-assessments, other submitted comments, and the 2017 OMS-MISO RAS. The Staff begins by noting that concern about resource adequacy has been driven by the continuing retirement of older coal-fired generation plants, caused largely by environmental requirements. The Staff states that its primary focus has been on Zone 7 due to

³ As the participants know, on April 20, 2017, 2016 PA 341 (Act 341) became effective and ushered in the era of the state reliability mechanism (SRM) under Section 6w, MCL 460.6w. The Commission anticipates that the annual investigations into electric reliability will hereafter take place in the context of Section 6w of Act 341.

ongoing reliability concerns as early as the 2018/2019 planning year (PY). The Staff indicates that, for purposes of the report, it has defined “capacity surplus (shortfall)” as the “expected total load forecast plus the planning reserve margin requirements versus the total number of available planning resources residing within a particular LRZ.” Staff’s report, p. 2.

The Staff points out that a zone can fall short of its planning reserve margin requirements (PRMR) and still be expected to meet its customers’ requirements as long as: (1) the magnitude of the shortfall is less than the amount of resources that can be physically imported; (2) the zone has enough capacity physically located within the zone to meet the local clearing requirement and the loss of load expectation (LOLE)⁴ requirement; and (3) there are enough capacity resources available within the MISO footprint (though outside the zone) and available for import in the case of a shortfall. The Staff also treats unforced capacity basis (UCAP) megawatts (MWs) and zonal resource credits (ZRC) as synonymous. The Staff provides an analysis of the capacity outlook for Zone 7 (the Lower Peninsula, with the exception of the southwest corner), I&M’s territory (which is in the PJM Interconnection (PJM) in the southwest corner of the Lower Peninsula), and Zone 2 (the Upper Peninsula).

Local Resource Zone 7

Under MISO’s current capacity requirements, each LRZ must meet a minimum level of planning resources, known as the local clearing requirement (LCR), which is the amount of planning resources required to be physically located within a particular zone in order to meet the LOLE. The Staff’s analysis shows that Zone 7 is not expected to fall short of its LCR because Zone 7 resources exceed the MISO LCR for each PY analyzed (2018-2022). Staff’s report, p. 4, Table 1, line 9. For example, Zone 7 resources exceed the LCR for PY 2018/2019 by 206 ZRCs,

⁴ The LOLE is based on a 1 day in 10 years loss of load expectation – that is, the probability that an outage due to lack of supply would occur no more than 1 day in 10 years.

and exceed the LCR for PY 2019/2020 by 806 ZRCs.⁵ While the Staff notes that there is a shortfall of 991 ZRCs in the 2018/2019 PY relative to the PRMR when only generation resources physically located in LRZ 7 are considered, this amount is well below the zone's capacity import limit (CIL) of 3,320 ZRCs, indicating that any shortfall could be addressed through importation from other resources within the MISO footprint.

The Staff explains that significant changes that may occur in PY 2018/2019 in LRZ 7 include the potential closure of the Palisades Nuclear Plant and resulting loss of ZRCs, reduction of the UCAP rating for the St. Clair Power Plant as a result of a 2016 fire, the return of other generating units to their historical UCAP ratings, and a slight decrease in the PRMR for the zone.

Finally, the Staff notes that the June 2017 OMS-MISO RAS indicates a capacity shortfall in Zone 7 for the 2018/2019 PY of 700-1000 MW (700 MW of committed resources and 300 MW resulting from outages). The Staff points out that the survey results are presented in terms of installed capacity (ICAP), whereas the Staff's analysis was performed using UCAP. Accounting for this difference, the Staff concludes that the two reports share a similar outlook of the capacity position of Zone 7 for PY 2018/2019. The Staff further notes that the 2017 OMS-MISO RAS indicates that MISO will have a committed resource reserve margin of 17.9% in 2018 (on an ICAP basis), thus exceeding the LOLE reliability criteria requirement of 15.8% and indicating that there will be adequate capacity in the MISO footprint that could be used to address any shortfall in LRZ 7. Finally, the Staff posits that demand response will likely undergo expansion and present a resource for reducing peak capacity needs.

⁵ The Staff notes that any changes to actual 2018 PRMRs or UCAP ratings for LRZ 7 would impact these balances.

Indiana Michigan Territory

Based on its filing, I&M will continue with the PJM fixed resource requirement option. The Staff concludes that company-owned generation resources will be adequate to serve the utility's load obligations, and notes that the Federal Energy Regulatory Commission (FERC) projects that PJM will have a reserve margin of about 28%.

Local Resource Zone 2

Zone 2 encompasses the Upper Peninsula of Michigan (UP), and most of northern and eastern Wisconsin. The Staff notes that, as such, the aggregation of the data supplied by UP utilities in their filings does not allow for making determinations about the zone, because the zone is located in both Michigan and Wisconsin. The Staff addresses WEPCo's ownership of the Presque Isle Power Plant (PIPP), which is subject to the Amended and Restated Settlement Agreement (ARSA) approved in Case No. U-17682. The Staff indicates that under the ARSA, WEPCo has agreed to operate PIPP according to prudent utility practice, and to provide safe, reliable, and adequate electric service to all of WEPCo's Michigan customers. The Staff reports that the 2017 OMS-MISO RAS shows a capacity surplus of 6,000 MW for LRZ 2 in the 2018/2019 PY, and the Staff concludes that Zone 2 will have an adequate supply of capacity resources to meet its PRMR for that planning year.

Discussion

Resource adequacy – having the capacity to meet electricity demand at all times in the future, even in cases of extreme weather or major equipment outages – is fundamental to the Commission's role and responsibility to ensure safe, reliable energy at affordable prices. A core function of regulating electric utilities is to ensure that prudent investments are made over time to maintain reliable operations, both in the near term and the long term. This is reinforced by the fact

that the Federal Power Act reserves jurisdiction to the states over resource adequacy, including decisions on the type, amount, and location of generation resources and other capacity alternatives.⁶ In addition, Act 341 clarified and expanded the Commission's role over resource adequacy in the state for all types of energy providers. *See*, MCL 460.6w.

With the changing generation mix throughout the nation and the closing of many coal plants, especially in Michigan, resource adequacy has been a key priority for the Commission over the past decade. The results of the Commission's five-year outlook yet again illustrate the tightening of capacity supplies in Michigan. Based on the Staff's analysis in this docket and the recently released 2017 OMS-MISO RAS,⁷ Michigan's near-term supply outlook for the summer of 2018 in Zone 7 will be adequate, given the availability of imports from out of state, but is predicted to continue to fall short of the PRMR absent incremental capacity additions through demand response, energy waste reduction, and new generation facilities and/or continued decline of load forecasts. The Commission remains concerned that LSEs in the Lower Peninsula do not have adequate capacity to meet the planning reserve requirements. Thus, in the near term, the regional supply outlook is critical when assessing our situation because LSEs in Zone 7 still need to rely on imports from out of state to meet the minimum required reserve margin. Supplies at the regional level have increased since last year, but it is highly likely that Michigan will need additional capacity resources within the state, due to additional expected retirements, to meet the LCR in the coming years.

⁶ 16 USC 824(b); *Connecticut Dept of Public Utility Control v FERC*, 569 F3d 477, 481 (CA DC, 2009).

⁷ The 2017 OMS-MISO RAS is available at: <https://www.misoenergy.org/Library/Repository/Meeting%20Material/Stakeholder/RASC/2017/20170712/20170712%20RASC%20Item%2002%20OMS%20Survey%20Results.pdf>. Slides 54-59 are of particular interest.

A review of prior Commission orders examining the capacity outlook illustrates that there have been notable fluctuations in capacity forecasts in Michigan and regionally over the past few years due to a variety of factors such as unexpected plant retirements and unplanned outages, generator performance issues, load forecast uncertainty, and changes in business decisions that have kept plants open that were previously slated for retirement.⁸ Notwithstanding the dynamic nature of capacity supplies, after years of conducting these annual assessments the Commission has established an effective process for monitoring capacity supplies and coordinating with MISO and energy providers to reconcile information in order to provide an outlook that is as transparent, accurate, and up-to-date as possible. The Commission expects to continue to refine this process under the new Act 341 resource adequacy framework, including in the capacity charge proceedings and the capacity demonstration proceedings that will take place over the 2017-2018 timeframe and thereafter.

Again, the Commission appreciates the cooperation of the utilities and other companies and organizations in these investigations over the years. The Commission also thanks the Staff for its expertise and its analysis of the data supplied by the participants to this proceeding.

THEREFORE, IT IS ORDERED that the part of this docket addressing the Commission's annual electric reliability investigation is closed.

⁸ In addition, potential changes to MISO rules related to the treatment of certain generating resources outside a local zone could affect the capacity outlook going forward. Such rule changes and others are under consideration by the RTO as part of its stakeholder process and would require FERC approval.

The Commission reserves jurisdiction and may issue further orders as necessary.

MICHIGAN PUBLIC SERVICE COMMISSION

Sally A. Talberg, Chairman

Norman J. Saari, Commissioner

Rachael A. Eubanks, Commissioner

By its action of July 31, 2017.

Kavita Kale, Executive Secretary